2015 Drinking Water Quality Report

City of Wichita Falls

"The fact that we made it through this drought is a testimony to the strength, courage, and fortitude of the citizens of Wichita Falls."

~ Russell Schreiber

THANK YOU!

Water is an important constituent in each of our daily lives, and quite frankly is taken for granted until there is a drought. These past 5 years have established a new “Drought of Record” for the north Texas area. Through your monumental efforts in conservation, and with the Direct Potable Reuse project, the City of Wichita Falls has successfully negotiated these most difficult times. The fact that we made it through this drought is a testimony to the strength, courage, and fortitude of the citizens of Wichita Falls.

Thank you for your efforts.

Russell J. Schreiber, P.E.
Director of Public Works

SUPERIOR QUALITY

Essential to a progressive community is a reliable and safe supply of drinking water. The City of Wichita Falls is committed to providing its citizens with that reliable supply of superior quality drinking water now and in the future. We are pleased to announce, once again, that your drinking water falls safely within all Federal and State drinking water health standards.

The Texas Commission on Environmental Quality (TCEQ) has inspected the City of Wichita Falls Water System and determined it is compliant with guidelines set forth by the TCEQ and the US Environmental Protection Agency. The City of Wichita Falls currently maintains a “SUPERIOR WATER SYSTEM” classification from the TCEQ, its highest classification. Ratings are based on continued compliance with Federal and State regulations governing drinking water and annual sanitary surveys conducted by a TCEQ Registered Sanitarian.

AT RISK POPULATIONS

You may be more vulnerable than the general population to certain microbial contaminants, such as Cryptosporidium, in drinking water. Infants, some elderly, or immune-compromised persons such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hot line at (800) 426-4791.

(L to R: Daniel Nix, Darron Leiker & Glenn Barham, Mayor)

AWARD WINNING WATER

Allen H. Plummer Environmental Sustainability Award Provided by the Water Environment Association of Texas (WEAT), this award was presented to the City of Wichita Falls for "demonstrating environmental sustainability by successful management of water resources through an intense drought of historic proportions, as well as establishment of creative long-term stewardship for available sources."

This award recognizes the extreme conservation on the part of the citizens and industries in Wichita Falls, the direct potable reuse treatment plant, the development of the permanent, indirect potable reuse project, the implementation of new distribution system flushing protocols leading to a reduction of water loss, development of a methane recovery project at the River Road Wastewater Treatment Plant as well as management and oversight of each of the projects mentioned.

Watermark Award for Communication Excellence, City of Wichita Falls City News Water Report provided by the Water Environment Association of Texas (WEAT) and the Texas Section-American Water Works Association (TAWWA), this award was presented to the City of Wichita Falls for the special edition of the monthly newsletter produced in May of 2014. The newsletter provided details about actions taken during the previous three years of drought, information on what the future held and more conservation tips for citizens. It also answered many of the City of Wichita Falls most frequently asked questions relating to the drought.

As the award states, "The result of this education campaign was fantastic. The public cut their daily water use in half and the city built and brought online its direct potable reuse project, which returns five million gallons of water a day to the city's potable water system." The awards would not have been possible without the tremendous public support for the current and future water projects during the last several years of the drought. Wichita Falls has been recognized, not only locally and nationally, but even internationally for the reuse projects, and one of the first questions asked is "how did you get public support?" Thank you for helping make these projects a success.

To learn more about your Water Treatment Process, visit our web site at: www.wichitafallstx.gov/index.aspx?NID=22 or call us at (940) 691-1153.

En Espanol

Esta reporte contiene informacion importante acerca de su agua potable. Procure que alguien le traduzca este reporte, o hable con alguien que lo entienda y se lo explique. Para obtenener una copia de esta informacion en Espanol, por favor marque 761-7401.

The Kids' H2O ZONE

CAN YOU FIND THESE WORDS? IT'S ALL ABOUT WATER!

The Water Treatment Process

In this year's Drinking Water Quality Report, we are going to discuss a new treatment process added for the Direct Potable Reuse Treatment Plant, Ultraviolet Light Disinfection.

Ultraviolet (UV) Light Disinfection

UV light disinfection involves passing water through a UV reactor and exposing the water to UV light from special lamps inside the reactor. UV lamps can provide a broad spectrum of light to neutralize microbes, but in our case, the wavelength is tuned specifically for neutralization of Cryptosporidium. The UV light reactor mimics the sun's UV rays in the environment, but works much quicker. The City of Wichita Falls receives extra treatment credit for removal of Cryptosporidium by using this advanced treatment process.

D	Z	S	E	K	A	L	H	D	E
H	R	I	L	Q	N	I	A	R	V
W	U	O	S	N	O	W	I	I	A
E	Z	K	U	Z	X	T	L	N	P
L	Y	S	N	G	H	U	E	K	O
D	S	K	M	G	H	L	E	J	R
D	A	F	I	R	C	T	R	Q	A
U	V	L	D	Y	O	S	U	R	T
P	E	O	C	F	G	T	T	E	I
C	L	O	U	D	S	E	S	T	O
V	Q	D	I	E	Y	A	I	A	N
O	A	N	C	P	B	M	O	W	Z
M	R	I	V	E	R	S	M	B	X
Q	L	W	S	T	R	E	A	M	S

Answers on page 7

Hey Kids! You want to Learn More Cool Facts About Water?

Ask your parents to help you check out the EPA web site. It has lots of fun activities for kids and links to other sites about water.
www.epa.gov/safewater/kids/index.html

WORD SEARCH

LAKES	RAIN	PUDDLE
RIVERS	FLOOD	DRINK
STREAMS	WATER	STEAM
STORMS	SUN	SNOW
MOISTURE	CLOUDS	SAVE
SKY	EVAPORATION	DAM
ICE	HAIL	CYCLE
DROUGHT	WIND	LIGHT

SOURCES

The City of Wichita Falls has previously only utilized 2 of its surface water reservoirs; Lake Arrowhead and Lake Kickapoo. While these 2 lakes have provided the citizens of Wichita Falls with a reliable source of drinking water for the last 60 years, it became necessary to evaluate the other reservoirs that were previously considered to be less-desirable, in an effort to extend the City's reliable supply for the next 50 years.

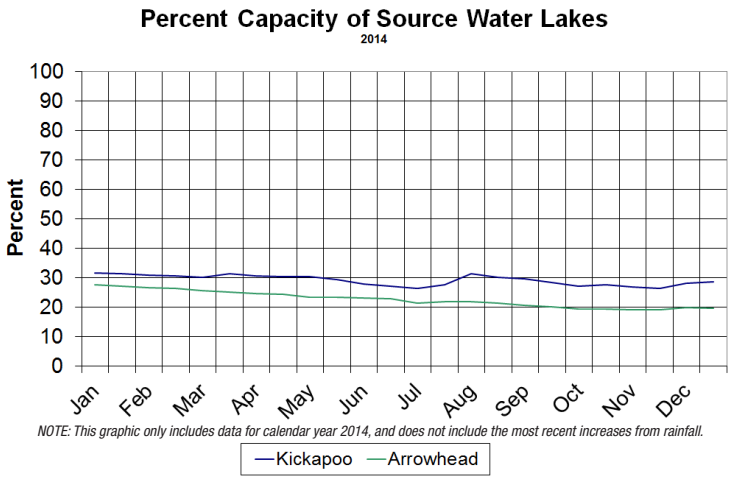
2009 marked the first full year of the City using Lake Kemp as a source of drinking water. However, Lake Kemp was not used as a drinking water source in 2014 due to the direct potable reuse project.

Source Water Susceptibility Assessments

A Source Water Susceptibility Assessment for lakes Arrowhead, Kickapoo & Kemp are currently being updated by the Texas Commission on Environmental Quality. This information describes the susceptibility and types of constituents that may come into contact with our drinking water source based on human activities and natural conditions. The information contained in the assessment allows the City of Wichita Falls to focus its source water protection strategies. Some of this source water assessment information will be available later this year on Texas Drinking Water Watch at http://dww.tceq.state.tx.us/DWW/. For more information on source water assessments and protection efforts at our system, please contact the City of Wichita Falls Public Works Department at 761-7477.

Lake Levels

"What are the lake levels?" is one of the most frequently asked questions about the City's source waters. Below is a graph of both Lake Kickapoo & Arrowhead levels through the calendar year of 2014. If you would like to know the current lake levels at any time during the year, the City posts the current lake levels on its web site at www.wichitafallstx.gov/index.aspx?nid=986



Lake Kickapoo

Lake Kickapoo is the first lake in the Little Wichita River watershed and has a drainage area of 275 square miles. Kickapoo was constructed in 1945, 18 miles southwest of Wichita Falls in Archer County. At its maximum capacity, Lake Kickapoo contains 106,000 acre feet (35 billion gallons) of water, which makes it the 56th largest fresh water reservoir (out of 119) in the State of Texas. It was named for the Kickapoo Indians and for Kickapoo Creek, which empties into the reservoir.

Lake Arrowhead

Lake Arrowhead is the last lake in the Little Wichita River watershed and has a drainage area of 832 square miles. Construction on Lake Arrowhead began in 1965, 15 miles southeast of Wichita Falls, primarily in Clay County. At its maximum capacity, Lake Arrowhead contains 228,000 acre feet (74 billion gallons) of water, which makes it the 36th largest fresh water reservoir (out of 119) in the State of Texas.

Lake Kemp

Lake Kemp is the largest lake in the Big Wichita River watershed and has a drainage area of 2,086 square miles. Construction of Lake Kemp was completed in 1924, 37 miles west of Wichita Falls. At its maximum capacity, Lake Kemp contains 245,308 acre feet (80 billion gallons) of water, which makes it the 35th largest fresh water reservoir (out of 119) in the State of Texas. It was named for Joseph A. Kemp, who sought its construction to alleviate flooding issues within Wichita Falls.

Reclaimed Wastewater Effluent from River Road WWTP

The City of Wichita Falls was given approval by the TCEQ to begin using treated wastewater effluent from the River Road WWTP in June of 2014. The City's Direct Potable Reuse Plant began treating the reclaimed water on July 9, 2014 at just under 50% of the total production. The City of Wichita Falls continues to use this source today

Cryptosporidium

Cryptosporidium is a microscopic parasite that can be found in the digestive tracts of animals. It is shed in the feces and when ingested by humans may result in diarrhea, cramps, fever, and other gastrointestinal symptoms. People with healthy immune systems usually recover within a couple of weeks. However, individuals with weakened immune systems may be unable to clear the parasite from their intestines and suffer a chronic and debilitating illness known as cryptosporidiosis. (NOTE: The table below is providing you data on monitoring the City of Wichita Falls has undertaken to keep track of certain protozoans in its source waters. The City has tested its source water and drinking water for these parasites since 1994 and has never detected a single viable organism.

The EPA Source Water Protection Web site can be found at: water.epa.gov/infrastructure/drinkingwater/sourcewater/protection/index.cfm

Source Water Monitoring

	Wichita Falls Water Results		EPA Regulations		
Constituent	Reportable Vavlue	Range of Detection	Maximum Contaminant Level	Maxiumum Contaminant Level Goal	Analysis Year
Giardia; cysts Not naturally present in the environment	0	0 - 0	Not Regulated	0	2014
Cryptosporidium; oocysts Not naturally present in the environment	0	0 - 0	Not Regulated	0	2014

2014 Water Quality Analysis

The following tables contain all of the chemical and microbiological constituents which have been found in your drinking water for the calendar year 2014. The U.S. Environmental Protection Agency requires water systems to test up to 97 regulated constituents annually. Only twenty two (22) regulated constituents were detected in your water during 2014 and prior.

Units of Measure

- **Nephelometric Turbidity Unit (NTU):** A measure of water's clarity. Turbidity in excess of 5 NTU is just noticeable to the average person.
- **Parts per Million (ppm):** A measure of the concentration of a substance roughly equivalent to one packet of sugar in 250 gallons of iced tea.
- **Parts per Billion (ppb):** A measure of the concentration of a substance roughly equivalent to one packet of sugar in an Olympic-size swimming pool.
- **PicoCuries per Liter (pCi/L):** A measure of the radioactivity of the water.

Definitions

- **Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.
- **Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.
- **Maximum Residual Disinfectant Level (MRDL):** The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- **Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contamination.
- **Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.
- **Action Level:** The concentration of a contaminant which, if exceeded, triggers a treatment or other requirement which a water system must follow.

Regulated Compounds

These Compounds either occur naturally within the watersheds or are products of human activities. Turbidity is a measure of the "cloudiness" of the water due to suspended material. The City of Wichita Falls monitors it because it is a good indicator of the effectiveness of our filtration systems. For the year 2014, 100% of the >4300 turbiidty samples that were taken for regulatory compliance fell below the Treatment Technique of 0.3 NTU. Also, you will notice that some of our data, though representative are more than one year old. The State of Texas allows the City of Wichita Falls to monitor for some contaminants less than once per year when the DPR is not in operation because the concentrations of these contaminants do not change frequently

	Wichita Falls Water Results		EPA Regulations		
Constituent	Reportable Value	Range of Detection	Maximum Contaminant Level	Maximum Contaminant Level Goal	Analysis Year
Antimony; ppb Petroleum Refineries, Electronics, Solder	0.73	<0.2 - 0.73	6	6	2014
Arsenic; ppb Natural Geology	0.99	<0.7 - 0.99	10	0	2014
Barium; ppm Natural Geology; Drilling Waste	0.065	0.04 - 0.065	2	2	2014
Chromium; ppb Natural Geology, Steel & Pulp Mills	2.7	0.79 - 2.70	100	100	2014
Cyanide; ppb Discharge from plastic and fertilizer and steel/metal factories	170	0 - 170	200	200	2014
Fluoride; ppm Water Additive; Natural Geology	0.71	0.47 - 0.71	4	4	2014
Nitrate; ppm Fertilizer Runoff; Septic Tanks; Animal Waste	1.99	0.132 - 1.99	10	10	2014
Nitrite; ppm Fertilizer Runoff; Septic Tanks; Animal Waste	0.01	<0.0008 - 0.01	1	1	2014
Selenium; ppb Natural Geology; Petroleum Refineries	1.3	0 - 1.3	50	50	2014
Total Organic Carbon; ppm Naturally Present in the Environment	7.79	2.49 - 7.79	TT	N/A	2014
Turbidity; NTU Soil Runoff	0.23	0.01 - 0.23	TT = 0.3	N/A	2014
Combined Radium 226/228; pCi/L Decay of Natural & Man-Made Deposits	1	1 - 1	5	0	2014
Combined Uranium; ppb Decay of Natural & Man-Made Deposits	1.3	0 - 1.3	30	0	2014
Gross Beta Emitters; pCI/L Decay of Natural & Man-Made Deposits	6.3	5.5 - 6.3	50	0	2014

Regulated Disinfectants

The City of Wichita Falls utilizes Chloramines (Total Chlorine) and Chlorine Dioxide to inactivate disease causing viruses and bacteria in your drinking water. Disinfectants are monitored to ensure that they are adequately applied to the drinking water

	Wichita Falls Water Results		EPA Regulations		
Constituent	Reportable Value	Range of Detection	MRDL	MRDLG	Analysis Year
Chlorine Dioxide; ppm Disinfectant	0.58	<0.01 - 0.58	0.8	0	2014
Chlorine (Total); ppm Disinfectant (MRDL for running annual average)	4.1	0.5 - 4.1	4	<4.0	2014

Regulated within the Distribution System

There were 3 regulated disinfection by-products that were detectin in your drinking water in 2014. Disinfectants are very active compounds that not only inactivate disease causing organisms, but also react with other naturally occurring compounds in the source waters to produce new compounds referred to as disinfection by-products , or DBP's. The City of Wichita Falls takes great care in keeping the concentrations of these by-products below their regulated limits.

	Wichita Falls Water Results		EPA Regulations		
Constituent	Reportable Value	Range of Detection	Maximum Contaminant Level	Maximum Contaminant Level Goal	Analysis Year
Total Trihalomethane; ppb By-Product of Chlorination	41	21.8 - 53.9	80	0	2014
Haloacetic Acid 5; ppb By-Product of Chlorination	16	8 - 21	60	0	2014
Chlorite; ppm By-Product of Chlorine Dioxide	0.66	<0.10 - 0.66	1	0	2014

Lead and Copper

Lead and Copper are regulated at the consumers tap under the Lead and Copper Rule of 1991. This monitoring is conducted every 3 years, and the City has completed 6 cycles of monitoring. The City of Wichita Falls has an effective program of corrosion control to keep these two metals from being leached out of your household plumbing

	Wichita Falls Water Results		EPA Regulations		
Constituent	Reportable Value	90th Percentile	Maximum Contaminant Level	Maximum Contaminant Level Goal	Analysis Year
Lead; ppb Corrosion of Household Plumbing	2.2	2.17	15	0	2012
Copper; ppb Corrosion of Household Plumbing	0.0954	0.0954	1.3	1.3	2012

If present, elevated levels of lead can cause serious health problems, epecially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. This water supply is responsible for providing high quality drinking water, but cannot control the variety of materials used in plubming components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking wate, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

Regulated Microbiologicals

Coliform bacteria are naturally present in the environment.

	Total Coliform Bacteria		*E. coli* Bacteria		
Constituent	MCL	Highest No. of Positive	MCL	Highest No. of Positive	Analysis Year
Coliform Bacteria	5	1	1	0	2014

Puzzle Answers

Q	M	O	V	C	P	U	D	A	D	L	E	W	H	D	Z
L	R	A	Q	L	E	V	A	F	S	Y	Z	U	R	I	N
W	I	N	D	O	O	L	F	I	K	S	K	O	I	S	S
S	V	C	I	U	C	D	I	R	M	N	U	S	L	L	E
T	E	P	E	D	F	Y	R	C	G	G	Z	N	Q	Q	K
R	R	B	Y	S	G	O	C	T	H	H	X	O	N	I	A
E	S	M	A	E	T	S	U	R	L	U	T	W	I	A	L
A	M	O	I	S	T	E	R	T	E	E	L	—	A	R	H
M	B	W	A	O	I	R	Q	A	J	K	N	—	R	V	D
S	X	Z	N	O	—	T	A	Q	R	O	P	A	V	E	E

All Drinking Water May Contain CONTAMINANTS

When drinking water meets federal standards, there may not be any health based benefits to purchasing bottled water or point of use devices. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

Additional information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hot line at (800) 426-4791.

Wichita Falls
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